



School of Health and Medical Sciences
Cardiovascular and Genomics Research Institute
Postdoctoral Research Associate

Ref: 123-26-R

JOB DESCRIPTION

Post Title	Postdoctoral Research Associate
Grade	CSG 6
Contract type	Fixed term for 36 months
Responsible to	Dr Silvia Martin Almedina
Accountable to	Dr Paris Ataliotis, Head of Department
Responsible for	Nominated junior researchers and students
Liases with	Clinical and scientific research staff in the Lymphovascular Research (LYMRES) Group, members of the Genetics Research Section, and University as appropriate.

Overall purpose of job

We are seeking a new member of staff to join the Lymphovascular Research (LYMRES) Group, based within the Cardiovascular & Genomics Research Institute of City St. George's University of London. The group studies lymphovascular diseases, specifically Primary Lymphoedema, which is clinically and genetically heterogeneous and is caused by defects in the lymphatic system that lead to swelling of one or more limbs or other parts of the body. Treatment is limited to compression garments and manual lymphatic drainage. Our work has focused on the genetic causes of lymphatic failure. Finding the genetic causes of lymphatic dysfunction in Primary Lymphoedema, increases our understanding of the development of the lymphatic system. After the functional validation of the identified variants, we have been able to give a diagnosis to our patients and allow genetic counselling. However, we still need treatments for our patients.

This project aims to advance our understanding of the molecular and cellular mechanisms that lead to Primary Lymphoedema, focusing on the development of new in vitro tools (e.g. CRISPR-Cas9, multiplex signalling and drug screening assays) to investigate the EphrinB2/EPHB4/ERK signalling



pathway. This study will investigate how *EPHB4* gene variants cause Primary Lymphoedema and how disrupted pathways could be targeted with MEK inhibitors.

This post is funded by the Rosetrees Trust and the St George's Hospital Charity for 3 years. The post holder will assist the PI and Co-Investigators in delivering on the grant by being responsible for conducting, co-ordinating and managing the experimental laboratory work related to the grant aims.

1. Main Duties and Responsibilities

These include but not limited to:

Data acquisition and analysis

- Apply cell and molecular biology techniques for the analysis of in-vitro cultured human primary cells and immortalised cell lines.
- Maintenance of cell cultures and cell culture stocks.
- Engaging in and advancing multiple scientific lines of work simultaneously.
- Design and accurately execute experiments related to the investigation of the EphrinB2/EPHB4/ERK signalling pathway and the impact of MEK inhibitors in lymphatic endothelial cells.
- Implement new techniques and optimize protocols critical to the projects.
- Providing technical expertise and input for troubleshooting of experiments.
- Providing technical and experimental support to other lab members and students.
- Maintain accurate and detailed records of data collected as well as data reports as requested by the PI and Co-Investigators.
- Contribute to data processing, analysis and interpretation.
- Work with limited supervision.

Laboratory management

- Organisation and management of the laboratory including maintaining laboratory databases, ordering laboratory supplies, routine maintenance of lab equipment.
- Participate in laboratory duties and rotas to ensure the efficient running of the laboratory.
- Writing, executing and revising risk assessments and SOPs.
- Maintain proper safety procedures and practices in respect of work carried out.

Publications and Presentations

- Sharing experimental results and discoveries with the group leaders and the wider team in group meetings and seminars.
- Prepare data and writing up findings for publications and for use in grant applications.
- Provide written reports on activity and generated data for internal use and for preparation of project reports to the funding agency.

Teaching

- Training and supervision of both current and new lab members (including students) in general protocols and techniques that are commonly used in the lab or new methods developed as part of this project.



General

- Managing workload, co-ordinating and maintaining a productive dialogue with the wider team.
- Keep up to date with the activities in the group to anticipate future needs.
- Assisting the group leaders with daily tasks.
- Ensure requirements of patient confidentiality and information governance are met.
- Ensure that all research is undertaken according to Good Clinical Practice (GCP), Good Laboratory Practice (GLP) and University protocols.
- Communicate frequently and effectively with the Lymphovascular Research Group, including scientists and clinicians.
- To attend and participate in the departmental academic activities e.g. research group meetings and seminars.
- Keep up to date with scientific, clinical and professional issues, in particular developments in the specific subject area.

You are also expected to undertake other activities appropriate to your grade as directed by your manager. This job description reflects the present requirements of the post. As duties and responsibilities change, the job description will be reviewed and amended in consultation with the post holder from time to time. City St George's, University of London aims to provide opportunities for all its employees to develop the skills required to be successful in their role and to further develop their careers.

St George's School of Health & Medical Sciences, University of London, is committed to the San Francisco Declaration on Research Assessment (DORA) principles.

2. Nature and Scope of Job (optional)

The Lymphovascular research group collaborates with clinicians in the St. George's Hospital Trust (SGHT). Our research is centred around the SGHT Paediatric and Primary Lymphoedema Clinic, and aims to develop translational, bench to bedside approaches.

Over the last 15 years, the SGHT clinical interdisciplinary team led by Prof. Gordon and Prof. Mansour, has built up an unrivalled expertise in the phenotyping of primary lymphoedema. Better diagnostic criteria and patient grouping has enabled us to develop a new internationally accepted clinical pathway/algorithm for the classification of primary lymphoedema based on phenotype. The Paediatric and Primary Lymphoedema clinic at SGHT is a national tertiary referral service and a centre of excellence. DNA from over 640 phenotyped patients with primary lymphoedema and lymphatic malformations has been collected; the largest collection of such patients in the world. The close clinical-academic collaboration has led to the identification of numerous causal genes for primary lymphoedema.

The post holder could be a postdoctoral scientist with a PhD in cell biology and/or molecular biology and ideally with proven track record in the fields of biomedical research, rare diseases or vascular/lymphovascular sciences. Detailed knowledge of the lymphatic system will not be essential as there will be every opportunity to learn once in post.

The role will involve the development of novel tools to build our understanding of the impact of Primary Lymphoedema-associated EPHB4 receptor tyrosine kinase variants on the downstream signalling cascades and their molecular and cellular consequences. The project will focus on the ERK1/2 signalling pathway and MEK inhibitors but will also aim to identify new potential pathways for drug repurposing.



The postholder will be expected to be able to work autonomously, yet jointly with other members of the research team, and contribute to the general lab management responsibilities. We hope to recruit a colleague who will thrive as part of a multidisciplinary group and will work collaboratively to deliver the experimental aspects of the project.

3. Special Factors

The role is fixed term for 3 years with the possibility of extension subject to further funding becoming available and is offered as a full-time post. Some out-of-hours (e.g. weekends) working may be required although not as a norm.



Additional information

- The post holder must at all times carry out their responsibilities with due regard to City St George's, University of London's Equal Opportunities Statement.
- The post holder must accept responsibility for ensuring that the policies and procedures relating to Health and Safety in the workplace are adhered to at all times.
- The post holder must respect the confidentiality of data stored electronically and by other means in line with General Data Protection Regulation 2018 (GDPR) the Data Protection Act 2018.
- The post holder must carry out their responsibilities with due regard to the non-smoking environment of City St George's, University of London.
- Workplace values

The post holder will be expected to operate in line with City St George's workplace values which are:

- We care
 - We learn
 - We act
- Sustainable Development

City, University of London is committed to a policy of best practice to assist in building a sustainable way of life by taking a positive, solutions-orientated approach. All post holders are encouraged to contribute through their roles to improving the environment for City and the wider community.

Details of policy, information and staff development supporting the policy on the environment and sustainability can be found at www.city.ac.uk/green-policies.

The above list is not exclusive or exhaustive and the post holder will be required to undertake such duties as may reasonably be expected within the scope and grading of the post. All members of staff are required to be professional, co-operative and flexible in line with the needs of the post, Department, School and City St George's, University of London.

Job descriptions should be regularly reviewed and at least prior to the annual appraisal, if applicable or on a regular basis to ensure they are an accurate representation of the post.

Equality, Diversity and Inclusion Statement (EDI)

City St George's, University of London is committed to promoting equality, diversity and inclusion in all its activities, processes, and culture for our whole community, including staff, students and visitors.

The university will meet its obligations under the Equality Act 2010 in recruitment and seek to eliminate discrimination on the basis of age, caring responsibilities, disability, gender identity, gender reassignment, marital status, nationality, pregnancy, race and ethnic origin, religion and belief, sex, sexual orientation and socio-economic background.



Selection and promotion criteria are kept under review to ensure that individuals are treated on the basis of the job requirements and on their relevant personal merits; and are not disadvantaged by conditions or requirements which cannot be shown to be justifiable. City St George's operates a guaranteed interview scheme for disabled applicants.



Person Specification

Criteria	Description	Essential/ Desirable	How it is to be tested
Qualifications	<i>A degree in biomedical sciences or a related field.</i>	E	PQ/AF
	<i>PhD in molecular biology, cellular biology, biochemistry or a related discipline.</i>	E	PQ/AF
Experience	<i>Extensive practical experience of working in a research-based cell biology / molecular biology / biochemistry / biomedical sciences laboratory.</i>	E	CV, INT, SS1
	<i>Practical expertise with in vitro gene editing methodologies (e.g. CRISPR-Cas9 knock-in, CRISPR-Cas9 activation/inhibition, base editing) as part of a research project.</i>	E	INT, SS2
	<i>Extensive direct experience of mammalian cell culture including siRNA techniques, transfection methods (e.g. lipofection, electroporation) and downstream functional analysis.</i>	E	INT, SS3
	<i>Extensive direct experience with cell and molecular methodologies including western blot, immunofluorescence, cell proliferation migration and survival assays and protein-protein interaction methodologies (e.g. co-IP, proximity ligation assays).</i>	E	INT, SS4
	<i>Experience in microscopy (confocal, live cell imaging) and flow cytometry.</i>	D	INT
	<i>Experience with in vitro cell permeability assays.</i>	D	INT
	<i>Experience of mammalian cell culture transduction with adenovirus/lentivirus</i>	D	INT
Knowledge/ Skills	<i>Understanding of molecular biology and molecular genetics.</i>	E	CV, INT



	<i>Understanding of cell signalling pathways and/or drug screening in vitro</i>	E	INT
	<i>Ability to design, carry out and analyse experiments.</i>	E	INT
	<i>Excellent technical and problem-solving skills.</i>	E	INT
	<i>Excellent communication and inter-personal skills as part of delivering training to others in your research team; as well as willingness to learn new skills and teach these to others</i>	E	INT, SS5
	<i>Ability to prepare and present data for publication or dissemination.</i>	E	INT, SS6
	<i>Competent use of Microsoft Office tools, specifically Excel, Word and PowerPoint.</i>	E	CV, INT
	<i>Competent use of e.g. GraphPad, Image J, FlowJo</i>	D	CV, INT
Personal Attributes	<i>Demonstrable organisation skills and high-level of attention to detail with the ability to prioritise own workload.</i>	E	INT
	<i>Self-reliant with a high degree of self-motivation but can work in a multidisciplinary research team.</i>	E	INT
	<i>Capable of innovation and problem-solving.</i>	E	INT
	<i>Capable of developing new protocols and assays.</i>	E	INT
	<i>Capable of self-teaching and ability to quickly understand and appreciate unfamiliar areas of biology in order to create the best research protocols possible.</i>	E	INT

Key:

PQ=Prerequisite Qualification, AF=Application Form, CV=Curriculum Vitae,
SS=Selection/Supporting Statements, ST=Selection Test/Presentation, INT=Interview

Note: Elements marked SS (Supporting Statements) in the Person Specification will be highlighted in Step 6 (Supporting Statements) on the online application form. Applicants' answers to Step 6 are an essential part of the selection process. Applicants should write individual supporting statements to demonstrate how their qualifications, experience, skills and training fit each of the elements highlighted in this section.

Applicants should address other elements of the Person Specification in Step 7 (Additional Information). Shortlisting will be based on applicants' responses to Step 6 **and** Step 7. Therefore applicants should complete both sections as fully as possible on the online application form.

About City St George's, University of London

City St George's, University of London is the University of business, practice and the professions.

City St George's attracts around 27,000 students from more than 150 countries.

Our academic range is broadly-based with world-leading strengths in business; law; health and medical sciences; mathematics; computer science; engineering; social sciences; and the arts including journalism, dance and music.

In August 2024, City, University of London merged with St George's, University of London creating a powerful multi-faculty institution. The combined university is now one of the largest suppliers of the health workforce in the capital, as well as one of the largest higher education destinations for London students.

City St George's campuses are spread across London in Clerkenwell, Moorgate and Tooting, where we share a clinical environment with a major London teaching hospital.

Our students are at the heart of everything that we do, and we are committed to supporting them to go out and get good jobs.

Our research is impactful, engaged and at the frontier of practice. In the last [REF \(2021\)](#) 86 per cent of City research was rated as 'world-leading' 4* (40%) and 'internationally excellent' 3* (46%). St George's was ranked joint 8th in the country for research impact with 100% of impact cases judged as 'world-leading' or 'internationally excellent'. As City St George's we will seize the opportunity to carry out interdisciplinary research which will have positive impact on the world around us.

Over 175,000 former students in over 170 countries are members of the City St George's Alumni Network.

City St George's is led by Professor Sir Anthony Finkelstein.



School of Health and Medical Sciences currently offers a range of employee benefits:

- Salary:** **£43,482** pa. The starting salary range for **CSG Grade 6** is **£43,482- £44,746** and appointment is usually made at the minimum point.
- Hours:** 35 hours per week which can be done flexibly in various ways or part time/job share can also be considered. Staff are expected to work the hours necessary to meet the requirements of the role and this will be dependent on the service area.
- Annual leave:** 30 days per annum. Plus eight UK public holidays and four days when City St George's, University of London is closed (usually between Christmas and New Year). Part time staff receive a pro rata entitlement.
- Pension:** Membership of competitive pension schemes with generous employer contribution and a range of extra benefits.

[Superannuation Arrangements of the University of London \(SAUL\)](#)

[London Pension Fund Authority \(LPFA\)](#)

[Universities Superannuation Scheme \(USS\)](#)

[National Health Services Pension Scheme \(NHSPS\) \(existing members only\)](#)

- Flexible working** Flexible working, including part-time or reduced hours of work, opportunities to work from home for many posts, compressed hours and local flexibility in agreeing start and finish times of work.
- Travel** City St George's, University of London offers an interest free season ticket loan and participates in the [Cycle to Work Scheme](#).
- Gift Aid** If you would like to make a tax-free donation to a charity of your choice, this can be arranged through our Payroll.
- Sports and Leisure Facilities** Rob Lowe Sports Centre, situated on the St George's Healthcare NHS Trust site offers exercise facilities that can be utilised by City St George's, University of London staff.
- Within walking distance from St George's is Tooting Leisure Centre. Facilities include a swimming pool, gym and various exercise classes. The Centre offers staff an all-inclusive corporate membership. For more information please contact [Tooting Leisure Centre](#).



Shops and facilities There are a number of shops and facilities situated on site including ATMs, student bar and shop, Pret a Manger, M&S Simply Food store, library and multi-faith room.

Informal enquiries

Informal enquiries may be made via email to smartina@citystgeorges.ac.uk

Making an application

All applicants are encouraged to apply on line at <http://jobs.sgul.ac.uk> as our system is user friendly and the online application form is simple to complete. Please note that CVs only will not be accepted.

For any accessibility issues please contact hrhelp@sgul.ac.uk

Closing date: Sunday 22 March 2026

Interview date: To be confirmed. As shortlisted candidates will be notified by email, it is imperative that you provide an email address that is accessed frequently.

Please quote reference: 123-26-R

We are delighted that you are interested in working at St George's School of Health and Medical Sciences. You will be notified of the outcome of your application by email. We aim to respond to all candidates within 5 weeks of the closing date of the vacancy.

